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REPORT

OF THE

COMMISSIONERS OF THE

LAND OFFICE

IN RESPONSE TO A RESOLUTION

PASSED BY THE HOUSE OF REPRESENTATIVES

ON FEBRUARY 1, 1866

AND BY THE SENATE

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Anon. Cleaning sponge spicules. Microscope 12 1960 : 159-160.

Axelius, B. A. Flimmer-flagellum of the sponge. Nature, Lond. 191 : 1318-1319.

Axelius, B. A. (1.) The function and formation of the brush border in some types of invertebrate cells. Proc. Europ. reg. Conf. Electr. Microsc. Delft 2 1960 (1961) : 742-745, 2 figs.

Asano, K. see Hanzawa, S.

Badillo, L. Catalogo de especies fósiles del Museo del Instituto Geológico y Minero de España. Notas Inst. geol. Esp. 55 1959 : 71-124, 50 pls.

Baillie, A. D. Devonian geology of Lake Manitoba-Lake Winnipegosis area. Publ. Dep. Min. nat. Res. Manitoba 49 1951 : 1-72, 5 pls., figs.

Bárcosco, M. C. and Margineanu, C. Éléments Méditerranéens nouveaux dans la faune de la Mer Noire, rencontrés dans les eaux de Roumélie (Nord-ouest-Bosphore). Données nouvelles sur le problème du peuplement actuel de la Mer Noire. Colloq. Un. Int. Sci. biol., Ser. B 1959 35 : 63-74.

Bassindale, R. On the marine fauna of Ghana. Proc. zool. Soc. Lond. 137 : 481-510, 5 figs.

Bergquist, P. R. Demospongiae (Porifera) of the Chatham Islands and Chatham Rise, collected by the Chatham Islands 1954 Expedition. Bull. N.Z. Dpt. sci. industr. Res. 139 (Mem. N.Z. oceanogr. Inst. 13) : 169-206, 20 figs.

Bergquist, P. R. (1.) The Keratosa (Porifera) collected by the Chatham Islands 1954 Expedition. Bull. N.Z. Dpt. sci. industr. Res. 139 (Mem. N.Z. oceanogr. Inst. No. 13) : 207-219, 6 figs.

Bergquist, P. R. (2.) A collection of Porifera from northern New Zealand, with descriptions of seventeen new species. Pacif. Sci. 15 : 33-48, 18 figs.

Bessière, O. see Tuzet, O.

Butler, P. E. Morphologic classification of sponge spicules, with descriptions of siliceous spicules from the Lower Ordovician Bellefonte Dolomite in Central Pennsylvania. J. Paleont. 35 : 191-200, 1 pl., figs.

Cabioch, L. Étude de la répartition des peuplements benthiques au large de Roscoff. Cah. Biol. mar. 2 : 1-40, 2 figs., map.

Casey, R. The stratigraphical palaeontology of the Lower Greensand (sponges listed). Palaeontology 3 : 487-621, 8 pls., figs.

Debrenne, F. Nouvelles données sur la faune d'Archaeocyatha du jbel Taïssa (Anti-Atlas occidental). Notes Serv. Min. Maroc 152 : 7-38, 6 pls.

Debrenne, F. and M. Révision de la collection T. H. Ting d'Archaeocyatha conservée au Musée de Marburg (Allemagne). Bull. Soc. géol. Fr. (7) 2 : 695-706, 2 pls.

Defretin-Lefranc, S. Contribution à l'étude des Spongiaires siliceux du Crétacé supérieur du Nord de la France. Thèses présentées à la Faculté des Sciences de Lille pour obtenir le grade de Docteur es Sciences Naturelles : 1-178, 27 pls., figs.

de Laubenfels, M. W. Porifera of Friday Harbor and vicinity. Pacif. Sci. 15 : 192-202, 2 figs.

de Laubenfels, M. W. (1.) A problem in taxonomy : the sponge genus Reniera. Syst. Zool. 6 1957 (1958) : 156-159.

de Laubenfels, M. W. (2.) Zoological science and the problem of names. Turtox News 35 1957 : 258-261, 3 figs.

Dollfus, R. Ph. see Stoll, M. R.

Eales, N. B. The littoral fauna of the British Isles. A handbook for collectors. Third edition. London (Cambridge University Press) : pp. xvi [iii] 306, frontis., 24 pls., text-illus.

Engel, G. Fund eines hexactinelliden Schwammes im Oligozän des Emslandes. Ber. naturh. Ges. Hannover 105 : 7-10, 3 figs.

Fagerstrom, J. A. The fauna of the Middle Devonian Formosa Reef limestone of south-western Ontario. J. Paleont. 35 : 1-48, 14 pls.

- Finks, R. M., Yochelson, E. L. and Sheldon, R. P.** Stratigraphic implications of a Permian sponge occurrence in the Park City Formation of Western Wyoming. *J. Paleont.* **35** : 564-568, figs.
- Flügel, E.** Beiträge zur Paläontologie der nordalpinen Riffe—Neue Spongien und Algen aus den Zlambach-Schichten (Rhät) des westlichen Gosaukammes, Oberösterreich. *Ann. naturh. Mus. Wien* **65** : 51-56, 2 pls.
- Flügel, H.** *Receptaculites neptuni* Deffr. 1827 from the Upper Devonian of Kuh-i-Shotori, East-Iran. *Iran. Petrol. Inst. Bull.* **4** : 75-81, text-figs. 1-3.
- Fonin, V. D.** A new family of Cambrian Metacysthida: Prismocysthidae Fonin, *fam. n.* Dokl. Akad. Nauk S.S.S.R. (Earth Sciences) **135** 3 1960 : 725-727. [See also Translation **135** 1-6 : 1304-1306, fig.]
- Forster, G. R.** An underwater survey on the Lulworth Banks. *J. mar. biol. Ass. U.K.* **41** : 157-160, 1 fig.
- Forsyth, J. L.** see Root, S. I.
- Ganguly, B.** The stress of variable pH on sponge cells. *Proc. Indian Sci. Congr.* **46** 1959 : 375-376. (Abstract.)
- Ganguly, B. (1.)** Protoplasmic reactions of living sponge cells exposed to different pH levels. *Proc. Indian Sci. Congr.* **45** 1958 : 340. (Abstract.)
- Garms, R.** Biozönotische Untersuchungen an Entwässerungsgräben in Flussmarschen des Elbe-Aestuars. *Arch. Hydrobiol. Suppl.* **26** : 344-462, 5 pls., 21 figs.
- Grafstein, B.** A densitometric technique for measuring the rate of reaggregation of dissociated sponge cells. *Biol. Bull., Wood's Hole* **121** : 391-392. (Abstract.)
- Hancock, J. M.** see Peake, N. B.
- Hanzawa, S., Asano, K. and Takai, F.** Catalogue of type-specimens of fossils in Japan. vi+422 : Palaeontological Society of Japan.
- Howell, B. F.** Cretaceous Porifera of New Jersey. In *The Cretaceous fossils of New Jersey.* Bull. N.J. Div. Geol. **61** 1958 : 29-32, 3 pls. [Revision of *Paleont. Ser. geol. Surv. N.J.* **4** : 1907.]
- Humphreys, S.** see Humphreys, T.
- Humphreys, T., Humphreys, S. and Moscona, A. A.** A procedure for obtaining completely dissociated sponge cells. *Biol. Bull., Wood's Hole* **119** 1960 : 294. (Abstract.)
- Humphreys, T., Humphreys, S. and Moscona, A. A. (1.)** Rotation-mediated aggregation of dissociated sponge cells. *Biol. Bull., Wood's Hole* **119** 1960 : 295. (Abstract.)
- Jones, W. C.** Properties of the wall of *Leucosolenia variabilis*. I. The skeletal layer. II. The choanoderm and the porocyte epithelium. *Quart. J. micr. Sci.* **102** : 531-550, 6 figs.
- Kaminskaya, L. D.** New facts concerning the fauna of Black Sea sponges. *Dopov. Akad. Nauk Ukr. R.S.R.* **8** : 1091-1093, 2 figs. [English summary.]
- Katto, J.** Some problematics from the so-called unknown Mesozoic strata of the southern part of Shikoku, Japan. *Sci. Rep. Tôhoku Univ. Geol. Spec.* **4** 1960 : 323-334, 2 pls.
- Kawahara, T.** Regional differences in the composition of fouling communities in Ago Bay. *Rep. Fac. Fish. Univ. Mie* **4** : 65-80, 5 figs.
- Khomentovsky, V. V.** see Zhuravleva, I. T.
- Kochansky, V.** Fauna marinskog mioena južnog pobožja Medvednice (Zagrebačke gore). (Sponges, p. 206.) *Vjestnik Hrvatskog Državnog Geološkog Zavoda i Muzeja Zagreb* **2-3** 1944 : 171-280, 5 pls. [Croatian, German summaries.]
- Koltun, V. M.** Spicules of the Silicispongiae in the Upper Cretaceous of Transuralia and in the Palaeogene of the North Urals. *Paleont. Zhurnal* **1961** : 61-69, 3 pls.
- Korotkova, G. P.** Regeneration and somatic embryogenesis in the calcareous sponge *Leucosolenia complicata* Mont. *Acta biol. Acad. Sci. hung.* **11** : 315-334, 12 figs.
- Korotkova, G. P. (1.)** Regeneration and cell division by *Leucosolenia complicata* Mont. *Vestn. leningr. Univ.* **21** : 39-50, 6 figs. [Russian, English summaries.]
- Kothé, P.** Hydrobiologie der Oberelbe. *Arch. Hydrobiol. Suppl.* **26** : 221-343, 5 pls., 12 figs., 1 map.
- Kuhn, O.** Die Tier- und Pflanzenwelt des Solnhofener Schiefers. Mit vollsträndigen Arten- und Schriftenverzeichnis. *Geol. bavar.* **48** : 1-68, fig.
- Kummel, B.** History of the earth. An introduction to historical geology. Pp. i-xiv, 1-610, figs. Freeman : San Francisco, 1961.
- Lagneau-Herenger, L.** Contribution à l'étude des Spongiaires siliceux du Crétacé inférieur. *C.R. Soc. géol. Fr.* **1961** 6 : 168-169.
- Leitao, A. M., Pego, A. F. and Lopes, W. M.** Poríferos assinalados no Brasil. *Avulso Centr. Estud. zool. Univ. Brasil* **10** : 1-29, i-ii.
- Lévi, C.** Résultats scientifiques des campagnes de la "Calypso". XIV. Campagne 1954 dans l'Océan Indien. 2. Les spongiaires de l'Île Aldabra. *Ann. Inst. Océanogr. Paris N.S.* **39** : 3-32, 2 pls., 39 figs.
- Lévi, C. (1.)** Éponges intercoditales de Nha Trang (Viet Nam). *Arch. Zool. exp. gén.* **100** : 127-148, 22 figs., 2 pls.
- Lévi, C. (2.)** Ontogeny and systematics in sponges. *Syst. Zool.* **6** 1957 [1958] : 174-183, 4 figs.
- Lévi, C. (3.)** Spongiaires des côtes d'Israël. *Bull. Res. Council Israel* **6B** (3-4) 1957 : 201-212, 13 figs.
- Lévi, C. and Vacelet, J.** Éponges récoltées dans l'Atlantique Oriental par le "Président-Theodore-Tissier" (1955-1956). *Rev. Trav. Inst. Pêches marit.* **22** 1958 : 225-246, 33 figs.
- Lopes, W. M.** see Leitao, A. M.
- Mărgineanu, C.** see Băcescu, M. C.
- Maslov, A. B.** O novykh nakhodkakh arkhéotsial's pel'tami v verkhnei chasti kubkov. *Bull. Soc. Nat. Moscou geol.* **36** : 121-122. [In Russian.]

Maalov, A. B. (1.) A new species of the genus *Rhabdoenema* Okulitch, 1943, with a pelta in the upper part of the cup. Dokl. Akad. Nauk S.S.S.R. (Earth Sciences) **130** 5 1960 : 1117-1119, fig. [See also Translation **130** 1-6 : 200-202, fig.]

Miaghkova, E. I. Novuie punktui nakhodok *Aphrosalpinx textilis* Miaghkova. Tradui Ghorno-Gheol. Inst. **61** 1960 : 89-90, fig.

Miller, M. C. Distribution and food of the nudibranchiate Mollusca of the south of the Isle of Man. J. Anim. Ecol. **30** : 95-116.

Missarachevsky, V. V. Early Cambrian Archaeocyathi in the basin of the Shivelig-Khem River. Paleont. Zhurnal **1961** : 19-23, 1 pl., fig. [In Russian.]

Mookerjee, S. and Ganguly, B. The passage of inert particles through the cell surface. Proc. Indian Sci. Cong. **45** 1958 : 340. (Abstract.)

Moscona, A. A. see Humphreys, T.

Nagai, T. see Prosser, C. L.

Naletov, P. I. Katalog mestonakhozhdeny iskopayemykh fauny, flory, pyl'tay i slor tsentral'noi chasti Buryatskoi ASSR. Gosudarstvennoe Nauchno-Tekhnicheskoe Izdatel'stvo Literatury po Geologii i Okhrane Nedr : Moskva **1961** : 1-64. [In Russian.]

Nekvasilová, O. and Štemproková, D. Die Schwammnadeln der Branik-Schichten (Unterdevon-Böhmen). Čas. Mineral. Geol. **5** 1960 : 400-405, 2 pls., fig. [Czech., German summaries.]

Öpik, A. A. The geology and palaeontology of the headwaters of the Burke River, Queensland. Bull. Aust. Bur. Min. Res. geol. geophys. **53** : 1-249, 24 pls., figs.

Parenzan, P. Biocenosi bentoniche del Mar Grande di Taranto (Nota preliminare). Rapp. Comm. int. Mer Medit. **16** : 455-459.

Paris, J. Greffes et sérologie chez les Éponges siliceuses. Vie et Milieu **11** Suppl. : 1-74, 20 figs.

Paris, J. see Tuzet, O.

Peake, N. B. and Hancock, J. M. The Upper Cretaceous of Norfolk. Trans. Norfolk Norw. Nat. Soc. **19** : 293-339, 9 figs.

Pego, A. F. see Leitao, A. M.

Pestana, H. R. Fossils from the Johnson Spring Formation, Middle Ordovician, Independence Quadrangle, California. J. Paleont. **34** 1960 : 862-873, pls. 109-112, text-fig. 1.

Prosser, C. L. and Nagai, T. Contractile responses of marine and fresh-water sponges. Biol. Bull., Wood's Hole **121** : 404. (Abstract.)

Rasmont, R. Primitive animals reveal complex anatomy. Nat. Hist., N.Y. **71** : 62-76, 12 figs.

Rasmont, R. (1.) Une technique de culture des éponges d'eau douce en milieu contrôlé. Ann. Soc. zool. Belg. **91** 1960-1961 : 147-155, 6 figs.

Reid, R. E. H. Upper Cretaceous Hexactinellida of Great Britain and Northern Ireland. Part III. Palaeontogr. Soc. Lond. [Monogr.] : 27-48, 7 pls., figs.

Ropina, L. N. see Zhuravleva, I. T.

Rodriguez, J. see Root, S. I.

Root, S. I., Rodriguez, J. and Forsyth, J. L. Geology of Knox County. Bull. geol. Surv. Ohio **50** : i-vii, 1-232, 6 pls., figs.

Rossi, L. Sur un facies a Gorgonaires de la pointe du Mosco (Golfe de Gènes) (Note préliminaire). Rapp. Comm. int. Mer Medit. **16** : 517-521.

Rozanov, A. Yu. New data on Archaeocyatha of the Shorian Highland. Dokl. Akad. Nauk S.S.S.R. (Earth Sciences) **131** 3 1960 : 663-666, fig. [See also Translation **131** 1-6 : 403-406, fig.]

Rozanov, A. Yu. (1.) Nekotorye zakonomernosti zvylyutsii arkhotsiat. Bull. Soc. Nat. Moscou geol. **36** : 118-119. [In Russian.]

Sarà, M. Rinvenimento di *Ephydatia fluviatilis* (L.) in Sicilia ed osservazioni sugli Spongillidi italiani. Boll. Zool. **28** : 31-37, 2 figs.

Sarà, M. (1.) Ricerche sul gonocorismo ed ermafroditismo nei Poriferi. Boll. Zool. **28** : 47-59, 1 fig., 2 pls.

Sarà, M. (2.) Zonazione dei Poriferi nella grotta della "Gaiola". Ann. Ist. Zool. Univ. Napoli **13** : 1-32, 4 figs.

Sarà, M. (3.) Osservazioni sulla composizione, ecologia e differenziamento della fauna di Poriferi di acqua salmastra. Annu. Ist. Zool. Univ. Napoli **12** 1960 [1961] : 1-10, 3 figs.

Sarà, M. (4.) *Diactinolophia*, genere nuova di Plakinidae per *D. moncharmonti* sp. n. rinvenuta nel golfo di Napoli (Demospongiae). Annu. Ist. Zool. Univ. Napoli **12** 1960 [1961] : 1-7, 1 fig.

Sarà, M. (5.) Sulla coesistenza di specie strettamente affini di Poriferi in biotopi litorali. Boll. Zool. **28** 1959 : 89-96, 1 fig.

Sarà, M. (6.) Contributo alla conoscenza dei Poriferi del Mar Ligure. Ann. Mus. Stor. nat. Genova **70** 1958 : 207-244, 10 pls., 10 figs.

Sarà, M. and Siribelli, L. La fauna di Poriferi delle "secche" del Golfo di Napoli. I. La "secca" della Gaiola. Annu. Ist. Zool. Univ. Napoli **12** 1960 [1961] : 1-93, 26 figs.

Schmitz, W. Zur Frage der Klassifikation der binnenländischen Brackwässer. Colloq. Un. Int. Sci. biol., Ser. B **1959** : 179-226.

Schumacher, A. Die biologischen Verhältnisse in Nebenflüssen der Unterelbe. Arch. Hydrobiol. Suppl. **26** : 185-210, 20 figs.

Seilacher, A. Die Sphinctozoa, eine Gruppe fossiler Kalkschwämme. Abh. Akad. Wiss. Lit. Mainz. Math.-Nat. Kl. **1961** : 723-790, 9 pls., 8 figs.

Sheldon, R. P. see Finks, R. M.

Siribelli, L. Differenze nell'aspetto esterno e nello scheletro fra *Azinella verrucosa* O. S. e *Azinella damicornis* (Exper.) O. S. (Demospongiae). Ann. Ist. Zool. Univ. Napoli **13** : 1-24, 3 pls.

Siribelli, L. (1.) Le *Microciona* (Demospongiae) del golfo di Napoli. Ann. Ist. Zool. Univ. Napoli **12** 1960 [1961] : 1-23, 7 figs.

Siribelli, L. see Sarà, M.

Štemproková, D. see Nekvasilová, O.

Stephen, A. C. Sponge growing on a siphunculid. *Scott. Nat.* 70 : 79.

Stoll, N. R., Dollfus, R. Ph. and others. International code of zoological nomenclature adopted by the XV International Congress of Zoology. London (International Trust for Zoological Nomenclature) 1961 : pp. xviii, 176.

Stubbings, H. G. Fouling and anti-fouling. *Research* 14 : 309-314, 6 figs.

Takai, F. *see* Hanzawa, F.

Tanita, S. Report on the sponges collected from the Kurashima Strait, Seto inland sea. *Mem. Ehime Univ.* 4B (Biol.) : 335-354, 4 pls., 11 figs.

Tanita, S. (1.) Two sponges obtained by the training ship "Oshoro Maru" in the eastern Bering Sea. *Bull. Fac. Fish. Hokkaido Univ.* 11 : 183-187, 4 figs.

Tanita, S. (2.) Report on the non-calcareous sponges in the Museum of the Biological Institute of the Tôhoku University. Part I. *Sci. Rep. Tôhoku Univ.* (4) 27 : 131-140, 2 pls., 7 figs.

Tunet, O., Bessière, O. and Paris, J. Recherches sérologiques sur les spongiaires et les cnidaires. *Bull. biol.* 95 : 150-154.

Vacelet, J. Spongiaires (demosponges) de la région de Bonifacie (Corse). *Rec. Sta. mar. Endoume* 36 (Bull. 22) : 21-45, 4 figs.

Vacelet, J. (1.) Quelques éponges remarquables de Méditerranée. *Rev. Trav. Inst. Pêch. marit.* 25 : 351-354.

Vannucci, M. Catalogue of marine larvae. No. 1. São Paulo (Instituto Oceanográfico, Universidade de São Paulo) 1959.

Vologdin, A. G. On the genus *Ajaciocyathus* Bedford et Bedford, 1939, and the family Ajaciocyathidae Bedford et Bedford, 1939. *Dokl. Akad. Nauk S.S.S.R.* (Earth Sciences) 130 2 1960 : 421-424, fig. [See also Translation 130 1-6 : 175-178, figs.]

Vologdin, A. G. (1.) [The oldest representative of Archaeocyatha from the eastern slope of the Emdey mountain region.] *Dokl. Akad. Nauk S.S.S.R.* 110 1956 : 1085-1088, figs. [In Russian.]

Vologdin, A. G. (2.) [On the annulated non-chasmic Archaeocyatha from the Cambrian of Northern Asia.] *Dokl. Akad. Nauk S.S.S.R.* 103 1955 : 141-143, 3 figs. [In Russian.]

Voozaman, A. G. Spongiaria en Bryozoa. Verander. Fl. Fauna Zuidzee 1954 : 156-157.

Warburton, F. E. Inclusion of parental somatic cells in sponge larvae. *Nature, Lond.* 191 : 1317, 1 fig.

Ward, H. B. and Whipple, G. C. Freshwater biology. Second edition. Edited by W. T. Edmondson. New York (John Wiley & Sons) and London (Chapman & Hall Ltd.) 1959. pp. xxi, 1248, text-illustr.

Wells, H. W. The fauna of oyster beds, with special reference to the salinity factor. *Ecol. Monogr.* 31 : 239-266, 7 figs.

Wells, H. W. (1.) Boring sponges (Clionidae) of Newport River, North Carolina. *J. Elisha Mitchell sci. Soc.* 75 1959 : 168-173, 2 figs.

Wenzel, F. Ciliaten aus marinen Schwämmen. *Pubbl. Staz. Zool. Napoli* 32 : 272-277.

Whipple, G. C. *see* Ward, H. B.

Yochelson, E. L. *see* Finks, R. M.

Zhuravleva, I. T., Repina, L. N. and Khomentovsky, V. V. A continuous carbonate section of the Lower Cambrian Lena series in the Altai-Sayan Mountain Region and its characteristic fossils. *Dokl. Akad. Nauk S.S.S.R.* (Earth Sciences) 132 5 1960 : 1160-1162. [See also Translation 132 1-6 : 525-527.]

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References to the "Titles" are by the name(s) of the Author(s).

GENERAL LITERATURE AND HISTORY

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Bibliography.—Of Sphinctozoa, Seilacher.

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Techniques.—For cleaning sponge spicules, Anon; For measuring rate of reaggregation of dissociated sponge cells, Graustein; For obtaining completely dissociated sponge cells, Humphreys, T. and S. and Moscona; For obtaining aggregation of sponge cells by rotation, Humphreys, T. and S. and Moscona (1); Grafting and serological methods used in studies on sponges, Paris; Rearing fresh-water sponges from their gemmules under controlled conditions, Rasmont (1); Etching, sectioning and serial sectioning techniques, Seilacher.

STRUCTURE

General Works.—Rasmont.

Morphology.—Morphologic classification of spicules, Butler; Of siliceous sponges, Defretin-Lefranc; Of the wall of *Leucosolenia variabilis*, Jones; Spicules of Silicispongiae, Koltun; *Diacinolopha* gen. nov. and *Placinolopha* Topent discussed, Sarà (4); Of Sphinctozoa, Seilacher; Comparison of samples of *Azinella verrucosa* and *A. damicornis* from the same biotope in the Bay of Naples, Siribelli.

Histology.—Of grafts of *Tethya lyncurium* and *Suberites domuncula*, Paris.

Cytology.—Evidence that sponge choanocytes have flimmer-flagellae, Atzelius; Function of microvilli in sponge choanocytes, Atzelius (1); Effects of varying pH concentrations on sponge cells, Ganguly and (1); Reaggregation of dissociated sponge cells, Graefstein; Dissociated sponge cells, Humphreys, T. and S. and Moscona; The wall of *Leucosolenia variabilis*, Jones; Studies on *Leucosolenia complicata* Mont., Korotkova and (1); Experiments to ascertain the passage of inert particles through the cell surface, Mookerjee and Ganguly; Of grafts of *Tethya lyncurium* and *Suberites domuncula*, Paris.

PHYSIOLOGY

Regeneration.—Studies on *Leucosolenia complicata* Mont., Korotkova and (1).

Serology.—Of *Tethya lyncurium* and *Suberites domuncula*, Paris; Tuzet, Bessière and Paris.

Effects of Environment.—Sponge cells exposed to variable pH concentrations, Ganguly and (1); Response to chemical and electrical stimulation in marine and fresh-water sponges, Prosser and Nagai; Spicular modifications and habits of *Tedania anhelans* and *Hymeniacidon sanguinea* in brackish water, Sarà (3); Effects of salinity on the fauna of oyster beds in N. Carolina and the distribution of *Cliona* species relative to salinity, Wells; Reaction to salinity variation of *Cliona* colonies in Newport River, N. Carolina, Wells (1).

Experimental Studies.—On the wall of *Leucosolenia variabilis*, Jones; On grafts of *Tethya lyncurium* and *Suberites domuncula*, Paris; On serums from *Tethya lyncurium* and *Suberites domuncula*, Tuzet, Bessière and Paris.

REPRODUCTION AND SEX

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DEVELOPMENT

Embryology.—Of fresh-water sponges from gemmules under controlled conditions, Rasmont (1); Of four species of Demosponges, Sarà (1); Presence of parental somatic cells in larvae of *Cliona celata*, Warburton.

EVOLUTION AND GENETICS

Evolution.—Of Archaeocyathine genera, Rozanov (1); Evolutionary aspects of coexisting related species of *Clathrina* in the Bay of Naples, Sarà (5).

Phylogeny.—Evidence that sponge choanocytes evolved from choano-flagellate Protozoa, and of diphyletic origin of multicellular animals, Atzelius; Of Demosponges, Lévi (2).

Ontogeny.—Of Demosponges genera, Lévi (2).

ECOLOGY

Ecological Associations.—Fouling of marine installations by sponges and other organisms, Stubbings; Faunal changes caused by closure of the Zuider Zee, Voostman.

Population Studies.—Sponge population of Grotta della Gaiola, Bay of Naples, grouped into three zones, Sarà (2); Sponge fauna of Mediterranean lagoons compared with that of Lake Chilka (India), Sarà (3); Of coexisting related sponge species in littoral zones, Sarà (5); Sponge population of the zones in secca della Gaiola, Bay of Naples, Sarà and Siribelli; Comparison of *Cliona* colonies in Newport River, N. Carolina with other American *Cliona* colonies, Wells (1).

Communities.—Fauna of the Black Sea, Băcesco and Mărgineanu; Benthic communities at Roscoff, Cabioch; Quantitative survey of the fauna and flora of Lulworth Banks, Forster; Fauna of drains in marshes of the lower Elbe, Garms; Study of fouling communities at ten stations in Ago Bay, Japan, Kawahara; Fauna of the R. Elbe, Germany, Kothé; Benthic communities of Taranto harbour, Parenzan; Facies with *Gorgonia* near Spezia, Italy, fauna listed (Sponges, p. 518), Rossi; Marine and brackish-water faunas of the Baltic Sea, Schmitz; Animal populations in the tidal zone of the Elbe estuary, Germany, Schumacher.

Habits.—Mollusca feeding on sponges, Miller; Sponge attached to a siphonoid, *Phascolosoma granulatum* (Leuckart), Stephen; Sponges inhabited by ciliates, Wenzel.

Palaeoecology.—Of *Hyalostelia clinopentactinoides* sp. n., Butler; Of *Actinocoelia maeandrina* Finks, Finks, Yochelson and Sheldon.

DISTRIBUTION

FRESHWATER

Palaeoecologic Region : Germany, Kothé, Sicily, Sarà.

Oriental Region : Lake Chilka, India, Sarà (3).

MARINE

North Temperate

N. Atlantic.—Roscoff, Cabioch, British Isles, Eales, Lulworth, Forster, Germany, Garms, Azores, Spain, Lévi and Vacelet, Baltic, Schmitz, Germany, Schumacher, Scotland, Stephen, Denmark, Voostman, N. Carolina, U.S.A., Wells and (1).

Mediterranean.—Black Sea, Băcesco and Mărgineanu, Kaminskaya, Israel, Lévi (3), Italy, Parenzan, Rossi, Sarà (1), (2), (3), (4), (5), Ligurian sea, Sarà (6), Italy, Sarà and Siribelli, Siribelli and (1), Corsica, Vacelet, Greece, Alboran Is., Vacelet (1), Italy, Wenzel.

N. Pacific.—British Columbia, de Laubenfels, Japan, Kawahara, Tanita and (2), Bering Sea, Tanita (1).

Tropical

Atlantic.—Accra, Bassindale.

Indo-Pacific.—Aldabra Is., Lévi.

Pacific.—Viet Nam, Lévi (1).

South Temperate and Sub-Antarctic

South Pacific.—Chatham Is., Bergquist and (1), New Zealand, Bergquist (2).

GEOLOGICAL

Cambrian.—Spain, Badillo, Morocco, Debrenne, Australia, Debrenne and Debrenne, U.S.S.R., Fonin, Maslov and (1), Miagkova, Missarzhevsky, Australia, Öpik, U.S.S.R., Rozanov and (1), Vologdin and (1), (2), Zhuravleva, Repina and Khomentovskiy.

Ordovician.—U.S.A., Butler, Pestana.

Silurian.—

Devonian.—Canada, Baillie, Fagerstrom, Iran, Flügel, Czechoslovakia, Nekvasilová and Štemproková.

Mississippian.—U.S.A., Root, Rodriguez and Forsyth.

Carboniferous.—

Permian.—Wyoming, U.S.A., Finks, Yochelson and Sheldon, Sicily, Pakistan, Seilacher.

Triassic.—Austria, Flügel, Austria, U.S.A., Indonesia, Seilacher.

Jurassic.—Germany, Kuhn.

Cretaceous.—Gt. Britain, Casey, Nord, France, Defretin-Lefranc, New Jersey, U.S.A., Howell, U.S.S.R., Koltun, Norfolk, Peake and Hancock, Gt. Britain and N. Ireland, Reid.

Tertiary.—Germany, Engel, Japan, Katto, Yugoslavia, Kochanský, U.S.S.R., Koltun.

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Note.—The classification is according to L. H. Hyman, 1940.

References to the "Titles" are by the name(s) of the Author(s).

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†*Amblyosiphonella socialis* Waagen & Wentzel, p. 749, pl. 1, figs. 1-2; pl. 6, figs. 2-3, *multilamellosa* Waagen & Wentzel, p. 748, pl. 2, fig. 5, *radiciformis* Waagen & Wentzel, pp. 748-749, pl. 7, figs. 2-3, Permian, Salt Range, Pakistan, Seilacher, A.†*Acosymplesma expansum* sp. n., Triassic, U.S.A., Seilacher, A., pp. 768-769, pl. 8, figs. 2-4.†*Clathrina coriacea* (Mont.), Mediterranean, Ligurian Sea, Sarà, M. (6), p. 211; *C. cerebrum* (Macleay), p. 25, *contorta* (Bowerbank), pp. 25-26, *falcata* (Haeckel), *falcata forma gegenbauri* (Haeckel), p. 26, Mediterranean, Bay of Naples, Sarà, M. and Siribelli, L.†*Colospongia dubia* (Münster), Triassic, Austria, Seilacher, A., p. 751, pl. 1, fig. 3; pl. 2, fig. 3.†*Corynella jerseyensis* sp. n., Cretaceous, New Jersey, Howell, B. F., p. 31, pl. 2, figs. 1-3.†*Deningeria mirabilis* Wilkens, Triassic, Indonesia, Seilacher, A., p. 752, pl. 1, fig. 4; pl. 2, fig. 1, text-fig. 1.†*Girtycoelia* sp., Permian, Sicily, Seilacher, A., pl. 1, fig. 5; pl. 2, fig. 4.†*Leucandra abratsbo* Hozawa, Japan, Tanita, S., pp. 337-338.†*Leuconia aspera* (O. Schmidt), p. 212, *crambessa* (Haeckel), p. 212, pl. 3, Mediterranean, Ligurian Sea, Sarà, M. (6); *L. aspera* (O. Schmidt), *solida* (O. Schmidt), p. 27, sp., p. 28, Mediterranean, Bay of Naples, Sarà, M. and Siribelli, L.†*Leucosolenia nautika* de Laubenfels, San Juan archipelago, de Laubenfels, M. W., p. 192.†*Peronidella austriaca* sp. n., Triassic, Austria, Flügel, E., pp. 52-54, pl. 1, figs. 1-4.†*Polytholosa astoma* sp. n., pp. 760-762, pl. 3, figs. 1-5, *polystoma* sp. n., pp. 762-764, pl. 4, figs. 1-5, *cylindrica* sp. n., pp. 764-767, pls. 5, figs. 1-6; pl. 6, fig. 1; pl. 7, fig. 1; pl. 9, figs. 1-2, text-figs. 3, 6, *cylindrica cylindrica* subsp. nov., pp. 764-767, pl. 5, figs. 1-5; pl. 6, fig. 1; pl. 7, fig. 1; pl. 9, figs. 1-2, text-figs. 3, 6, *cylindrica dilatata* subsp. nov., pp. 764-767, pl. 5, fig. 6, Triassic, U.S.A., Seilacher, A.†*Scypha raphanus* (Schmidt) de Laubenfels, San Juan archipelago, de Laubenfels, M. W., pp. 192-193.†*Sycon raphanus* (O. Schmidt), Mediterranean, Ligurian Sea, Sarà, M. (6), p. 212; *S. ciliatum* (Fabricius), Mediterranean, Bay of Naples, Sarà, M. and Siribelli, L., p. 27; *S. ciliatum* (Fabricius), Scotland, Stephen A. C., p. 79.†*Verticillites columnella* (Parona), Permian, Sicily, Seilacher, A., pl. 2, fig. 2, text-fig. 2.

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†*Cosoloplychium jerseyensis* Shimer & Powers, Cretaceous, New Jersey, U.S.A., Howell, B. F., pp. 30-31, pl. 2, figs. 4-6.

†*Coscinopora infundibuliformis* Goldfuss, pp. 79-80, pl. 9, figs. 1-5, text-fig. 21, *macropora* Goldfuss, pp. 80-81, pl. 10, figs. 1-3, text-fig. 22, Cretaceous, Nord, France, Defretin-LeFranc, S.

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†*Dvorcia* gen. nov., p. 403, type species *mira* sp. n., p. 404, pl. 10, figs. 1a, b, 2, Devonian, Czechoslovakia, Nekvasilová, O. and Štemproková, D.

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†*Orthodiscus fragilis* Schrammen, Cretaceous, Nord, France, Defretin-LeFranc, S., pp. 67-69, pls. 5-8, text-fig. 19.

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†*Porocyclus* nom. nov. for *Actinocyclus* Schrammen, Defretin-LeFranc, S., p. 69.

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†*Pyritionema barrandei* Pošta, Devonian, Czechoslovakia, Nekvasilová, O. and Štemproková, D.; pp. 402-403, pl. 10, figs. 3-5.

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†*Toulminia catenifer* (T. Smith), Cretaceous, Nord, France, Defretin-LeFranc, S., p. 95, pl. 14, fig. 8.

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DEMOSPONGIAE

Sub-Class I

TETRACINELLIDA

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- †*Anthaspidella inyoensis* sp. n., Ordovician, California, Pestana, H. R., pp. 864-865, pl. 109, fig. 7.
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- Chondrillastra australiensis* (Carter), Viet Nam, Lévi, C. (1), p. 130, pl. 1, text-fig. 2.
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- †*Craterella platystoma* sp. n., Cretaceous, Nord, France, Defretin-Lefranc, S., pp. 100-101, pl. 16, figs. 1-2, text-fig. 30.
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- Discodermia laevidiscus* Carter, Aldabra Is., Lévi, C., pp. 5-6, fig. 3; *D. japonica* Döderlein, Japan, Tanita, S. (2), p. 139, pl. 4, fig. 12.
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Paramyzilla mediterranea sp. n., Mediterranean, Bay of Naples, Sarà, M. and Siribelli, L., pp. 53-54, fig. 11.

Paresperella macrosigma (Lindgren), Japan, Tanita, S. (2), pp. 135-137, pl. 4, figs. 8-9, text-fig. 5.

Petrosia testudinaria (Lamarck), Aldabra Is., Lévi, C., p. 24, fig. 31; *P. serrata* (Hentschel), Viet Nam, Lévi, C. (1), p. 140, pl. 1, text-fig. 15; *P. dura* (Nardo), p. 240, fig. 25, *friabilis* Topsent, p. 240, fig. 26, Azores, Lévi, C. and Vacelet, J.; *P. ficiformis* Poiret, Mediterranean, Ligurian Sea, Sarà, M. (6), p. 238; *P. ficiformis* Poiret, Mediterranean, Bay of Naples, Sarà, M. and Siribelli, L., p. 86; *P. duro* (Nardo), Mediterranean, Corsica, Vacelet, J., p. 43.

Phakellia ventilabrum (Johnston), Ortegá, and Porto, Spain, Lévi, C. and Vacelet, J., p. 243; *P. ventilabrum* (Johnston), Bering Sea, Tanita, S. (1), pp. 183-185, figs. 1-2; *P. ventilabrum* (Johnston), Mediterranean, Corsica, Vacelet, J., pp. 35-36.

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Plocamilla circumflexa Lévi, Mediterranean, Bay of Naples, Sarà, M. and Siribelli, L., p. 80.

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Psilocaulis flexibilis sp. n., Viet Nam, Lévi, C. (1), pp. 132-134, pl. 2, text-fig. 5.

- Pythaea rosea* Topsent, Ile d'Ouessant, Lévi, C. and Vacelet, J., p. 245, fig. 33; *P. digitifera* Lévi, Mediterranean, Corsica, Vacelet, J., p. 40.
- Raphidostyla incisa* (O. Schmidt) Topsent, p. 45, *pelligera* (O. Schmidt), pp. 45-46, *pelligera* forma *marsillii* (Topsent), p. 46, Mediterranean, Bay of Naples, Sarà, M. and Siribelli, L.; *R. incisa* (Schmidt), *marsillii* (Topsent), Mediterranean, Corsica, Vacelet, J., p. 36.
- Raspaciona aculeata* (Johnston), Mediterranean, Ligurian Sea, Sarà, M. (6), p. 232; *R. aculeata* (Johnston), Mediterranean, Bay of Naples, Sarà, M. and Siribelli, L., pp. 64-65, fig. 15; *R. aculeata* (Johnston), Mediterranean, Corsica, Vacelet, J., pp. 36-37.
- Raspailia agminata* Hollmann, Chatham Is., Bergquist, P. R., pp. 183-185, figs. 8a-o; *P. viminialis* (O. Schmidt), Mediterranean, Ligurian Sea, Sarà, M. (6), p. 232; *R. hirsuta* Thiele, Japan, Tanita, S., p. 344, pl. 3, fig. 10, text-fig. 4; *R. vinimalis* (O. Schmidt), Mediterranean, Corsica, Vacelet, J., p. 36.
- Raspailiidae sp., Mediterranean, Bay of Naples, Sarà, M. and Siribelli, L., pp. 66-67, fig. 16.
- Reniera simulans* (Johnston), *cratera* Schmidt, sp., Mediterranean, Corsica, Vacelet, J., p. 43.
- Rhabdermia stellata* sp. n., New Zealand, Bergquist, P. R. (2), pp. 41-42, text-figs. 13a, b, c; *R. bistylifera* sp. n., Aldabra Is., Lévi, C., pp. 15-16, fig. 18.
- Rhaphidophilus erectus* Thiele, Viet Nam, Lévi, C. (1), pp. 136-137, pl. 1, text-fig. 10.
- Rhizazinnella pyrifera* (delle Chiaze), Mediterranean, Ligurian Sea, Sarà, M. (6), p. 217, pl. 5; *R. pyrifera* (delle Chiaze), Mediterranean, Corsica, Vacelet, J., p. 32.
- Sigmadocia edaphus* (de Laubenfels), San Juan archipelago, de Laubenfels, M. W., p. 194, fig. 2a.
- Sigmatozella anneza* (O. Schmidt), Azores, Lévi, C. and Vacelet, J., p. 235.
- Siphonochalina truncata* Lindgren, Japan, Tanita, S., p. 339, pl. 1, fig. 2; *S. truncata* Lindgren, Japan, Tanita, S. (2), pp. 132-133, pl. 3, figs. 1-2, text-fig. 1.
- Spirastrella pachyspira* Lévi, p. 13, fig. 14, *globularis* Dendy, p. 13, fig. 15, *inconstans* Dendy, pp. 13-14, *inconstans* var. *digitata* Dendy, pp. 13-14, Aldabra Is., Lévi, C.; *S. cunctatrix* O. Schmidt, Mediterranean, Ligurian Sea, Sarà, M. (6), p. 221; *S. cunctatrix* O. Schmidt, *minax* Topsent, Mediterranean, Bay of Naples, Sarà, M. and Siribelli, L., p. 39; *S. abata* sp. n., pp. 348-349, pl. 4, fig. 16, text-fig. 8, *insignis* Thiele, pp. 349-350, pl. 4, fig. 17, text-fig. 9, Japan, Tanita, S.
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- Spongosorites topsenti* sp. n., p. 233, fig. 14, *pachastrelloides* (Topsent), p. 233, Azores, Lévi, C. and Vacelet, J.; *S. pachastrelloides* (Topsent), Mediterranean, Corsica, Vacelet, J., p. 29.
- Strongylophora durissima* Dendy, Aldabra Is., Lévi, C., p. 24, fig. 32.
- Stylaxinella stuposa* (Esper), Mediterranean, Bay of Naples, Sarà, M. and Siribelli, L., p. 47.
- Styliessa stipitata* sp. n., San Juan archipelago, de Laubenfels, M. W., pp. 199-200, fig. 1, F1, 2C.
- Stylopus dujardini* (Bowerbank), Mediterranean, Corsica, Vacelet, J., p. 41.
- Stylostichon dives* Topsent, *fibulatum* Topsent, Mediterranean, Bay of Naples, Sarà, M. and Siribelli, L., p. 59.
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- Suberites carnosus* (Johnston), *carnosus* var. *heinrothi* Arnd., Black Sea, Basesco, M. C. and Mărgineanu, C., p. 70; *S. cupuloides* sp. n., New Zealand, Bergquist, P. R. (2), p. 42, text-figs. 14a, b; *S. cruciata* Dendy, Aldabra Is., Lévi, C., p. 11, fig. 11; *S. lobulata* sp. n., Viet Nam, Lévi, C. (1), p. 132, pl. 2, text-fig. 4; *S. carnosus* Johnston, Ile d'Ouessant, Lévi, C. and Vacelet, J., p. 242, figs. 27-28; *S. carnosus* (Johnston), Mediterranean, Ligurian Sea, Sarà, M. (6), p. 217; *S. carnosus* (Johnston), pp. 40-42, fig. 7, *domuncula* (Oliv), p. 42, sp. p. 42, fig. 8, Mediterranean, Bay of Naples, Sarà, M. and Siribelli, L.; *S. domuncula* (Oliv), Mediterranean, Corsica, Vacelet, J., p. 32.
- Syringella amphispicula* sp. n., San Juan archipelago, de Laubenfels, M. W., p. 200, fig. 2D.
- Tedania diversiraphidophora* Brandstedt, Chatham Is., Bergquist, P. R., p. 183; *T. fragilis* Lambe, San Juan archipelago, de Laubenfels, M. W., p. 197; *T. brevispicula* Thiele, Viet Nam, Lévi, C. (1), p. 136, text-fig. 9.
- Terpios fugax* Duchassaing & Michelotti, Mediterranean, Bay of Naples, Sarà, M. and Siribelli, L., pp. 42-43; *T. fugax* Duch. & Mich., Mediterranean, Corsica, Vacelet, J., pp. 32-33.
- Tethys compacta* sp. n., p. 193, fig. 15, *multistella* Lendenfeld, pp. 193-197, figs. 16a-b; Chatham Is., Bergquist, P. R.; *T. aurantium* (Pallas), Mediterranean, Ligurian Sea, Sarà, M. (6), p. 217; *T. amamensis* Thiele, Japan, Tanita, S., pp. 350-351, p. 4, fig. 18, text-fig. 10; *T. aurantium* (Pallas), Mediterranean, Corsica, Vacelet, J., p. 29.
- Tethyspira spinosa* (Bowerbank), Mediterranean, Bay of Naples, Sarà, M. and Siribelli, L., p. 64; *T. spinosa* (Bowerbank), Mediterranean, Corsica, Vacelet, J., p. 39.
- Tetrapocillon kurushimensis* sp. n., Japan, Tanita, S., p. 346, pl. 3, figs. 12-13, text-fig. 6.
- Thoosa tortonesi* sp. n., Mediterranean, Ligurian Sea, Sarà, M. (6), pp. 217-221, text-fig. 2.
- Timea anthastra* sp. n., p. 11, fig. 12, *curvistellifera* (Dendy), pp. 11-12, fig. 13, Aldabra Is., Lévi, C.; *T. fasciata* Topsent, *uniellata* Topsent, p. 34, *stellifasciata* sp. n., pp. 34-36, fig. 5, *irregularis* sp. n., pp. 37-38, fig. 6, Mediterranean, Bay of Naples, Sarà, M. and Siribelli, L.; *T. mixta* Topsent, Mediterranean, Corsica, Vacelet, J., p. 30.
- Topsentia genitrix* (O. Schmidt), Mediterranean, Ligurian Sea, Sarà, M. (6), pp. 226-227, text-fig. 6.
- Toxadocia toxophorus* (Hentschel), New Zealand, Bergquist, P. R. (2), pp. 37-38; *T. cylindrica* sp. n., Japan, Tanita, S. (2), p. 135, pl. 3, figs. 6-7, text-fig. 4.
- Trachyopsis halichondrioides* Dendy, p. 26, fig. 35, *aplysinoides* Dendy, pp. 26-27, *stellettoides* sp. n., p. 27, fig. 36, Aldabra Is., Lévi, C.
- Tricheurypon viride* (Topsent), Azores, Lévi, C. and Vacelet, J., p. 236.

Tylodroma informis Stephens, Azores, Lévi, C. and Vacelet, J., p. 235, fig. 16.

†*Vioe* sp., Miocene, Yugoslavia, Kochansky, V., p. 206.

Xenospongia patelliformis Gray, Viet Nam, Lévi, C. (1), pp. 130-131, text-fig. 3.

Xestospongia vanilla (de Laubenfels), San Juan archipelago, de Laubenfels, M. W., p. 194.

Sub-Class III

KERATOSA

Aplysilla sulfurea (Schulze), Mediterranean, Bay of Naples, Sarà, M. and Siribelli, L., p. 86; *A. sulfurea* (Schulze), Mediterranean, Corsica, Vacelet, J., p. 43.

Cacospongia scalaris O. Schmidt, Mediterranean, Ligurian Sea, Sarà, M. (6), p. 241.

Chelonaphysilla naevus (Carter), Viet Nam, Lévi, C. (1), p. 147; *C. naevus* (Carter), Porto, Spain, Lévi, C. and Vacelet, J., p. 245; *C. naevus* (Carter), Mediterranean, Bay of Naples, Sarà, M. and Siribelli, L., p. 86.

Darwinella ozeata sp. n., Chatham Is., Bergquist, P. R. (1), pp. 216-218, figs. 6a-c.

Dendrilla cactus (Selenka), Chatham Is., Bergquist, P. R. (1), pp. 215-216, figs. 5a-b.

Dysidea cristagalli sp. n., New Zealand, Bergquist, P. R. (2), p. 33, text-fig. 1b; *D. fragilis* (Montagu), Chatham Is., Bergquist, P. R. (1), pp. 211-212, figs. 3a, b; *D. fragilis* (Montagu), Mediterranean, Ligurian Sea, Sarà, M. (6), p. 241; *D. fragilis* (Montagu), Mediterranean, Bay of Naples, Sarà, M. and Siribelli, L., p. 87; *D. fragilis* (Montagu), *avara* (Schmidt), *tupha* (Martens), Mediterranean, Corsica, Vacelet, J., p. 43.

Euryospongia arenaria sp. n., Chatham Is., Bergquist, P. R. (1), p. 212, figs. 4a-c.

Fasciospongia cavernosa (Schmidt), Mediterranean, Corsica, Vacelet, J., p. 44.

Hippiospongia communis (Lamarck), Mediterranean, Ligurian Sea, Sarà, M. (6), p. 240.

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Igernella mirabilis sp. n., Aldabra Is., Lévi, C., pp. 28-29, figs. 37-39.

Ircinia novae zealandiae sp. n., New Zealand, Bergquist, P. R. (2), p. 33, text-fig. 1a; *I. fasciculata* (Pallas), *fasciculatus* var. *typica* de Laubenfels, var. *dendroides* de Laubenfels, p. 240, *strobilina*, p. 240, *strobilina* var. *typica* de Laubenfels, pp. 240-241, Mediterranean, Ligurian Sea, Sarà, M. (6); *I. fasciculata* (Pallas), Mediterranean, Bay of Naples, Sarà, M. and Siribelli, L., p. 88; *I. fasciculata* (Pallas), *dendroides* (Schmidt), Mediterranean, Corsica, Vacelet, J., p. 44; *I. paucifilamentosa* sp. n., Mediterranean, Castellorizo (Greece), Vacelet, J. (1), p. 354, fig. 3.

Leiosella levis (Lendenfeld), Chatham Is., Bergquist, P. R. (1), pp. 209-210, fig. 1a, b.

Megalopastias retiaris Dendy, Aldabra Is., Lévi, C., p. 28.

Oligoceras collectrix Schulze, Mediterranean, Bay of Naples, Sarà, M. and Siribelli, L., p. 88.

Phyllospongia madagascarensis Hyatt, Aldabra Is., Lévi, C., p. 27.

Pteraplysilla spinifera (Schulze), Mediterranean, Bay of Naples, Sarà, M. and Siribelli, L., p. 87.

Polyfibrospongia australis (Lendenfeld), Chatham Is., Bergquist, P. R. (1), pp. 210-211, figs. 2a, b; *P. australis* (Lendenfeld), *australis* var. *conulata* Viet Nam, Lévi, C. (1), pp. 146-147, pl. 2.

Spongia reticulata (Lendenfeld), New Zealand, Bergquist, P. R. (2), p. 33; †*S. shikokuensis* sp. n., Oligocene, Japan, Katto, J., p. 324, pl. 34, figs. 10, 13; *S. officinalis* Linné, p. 239, *officinalis* var. *typica* de Laubenfels, p. 239, pl. 11, *agaricina* Pallas, p. 239, pls. 12-13, *zimocca* O. Schmidt, p. 239, Mediterranean, Ligurian Sea, Sarà, M. (6); *S. virgultosa* (O. Schmidt), Mediterranean, Bay of Naples, Sarà, M. and Siribelli, L., p. 87; *S. agaricina* Pallas, Mediterranean, Corsica, Vacelet, J., p. 44.

Spongionella monoprocta sp. n., Viet Nam, Lévi, C. (1), pp. 145-146, pl. 2, text-fig. 22.

Verongia aurea (Hyatt), Mediterranean, Ligurian Sea, Sarà, M. (6), p. 241; *V. cavernicola* Vacelet, Mediterranean, Corsica, Vacelet, J., p. 44.

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Merlia normani Kirkpatrick, Mediterranean, Cap Matapan, Vacelet, J. (1), p. 353.

Monectyon gen. nov., p. 236, *atlanticus* sp. n., p. 236, fig. 17, Azores, Lévi, C. and Vacelet, J.

Radiella tissieri sp. n., Mediterranean, La Galite, Cap. Farina, Vacelet, J. (1), pp. 351-353, figs. 1-2.

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†*Ammonella quadrata* Walther, Jurassic, Germany, Kuhn, O., p. 13.

†*Ehlerospongia* gen. nov., p. 5, type species *stellata* sp. n., Devonian, Canada, Fagerstrom, J. A., p. 5, pl. 3, figs. 21-23.

†*Oxeaklostera*, Ordovician, U.S.A., Butler, P. E., p. 198, pl. 39, figs. 22-25.

†*Receptaculites* sp., Devonian, Canada, Fagerstrom, J. A., p. 5, pl. 3, fig. 24; *neptuni* DeFrance, Devonian, Iran, Flügel, H., pp. 77-78, text-figs. 1-3.

†*Sphaerospongia tessellata* (Phillips), sp., Devonian, Canada, Bailie, A. D., p. 29.

ARCHAEOCYATHA

†*Ajaciocyathidae* Bedford & Bedford revised to include *Ajaciocyathus* Bedford & Bedford, *Ascoyathus* gen. nov., *Subtilocyathus* gen. nov., *Gorskiocyathus* gen. nov., *Neocyathus* gen. nov., *Turgidocyathus* gen. nov., *Rotundocyathus* gen. nov., *Sclerocyathus* gen. nov., *Schincocyathus* gen. nov., *Serratocyathus* gen. nov., *Phicoyathus* gen. nov., *Archaeocyathellus* Ford, *Densocyathus* Vologdin, *Nevadacyathus* Okulitch, *Orbicyathus* Vologdin, *Septocyathus* Vologdin, *Uroyathus* Vologdin, *Ventriculocyathus* Vologdin, *Archaeofungia* Taylor, *Sibirecyathus* Vologdin, *Adrosocyathus* Bedford & Bedford, *Copleicyathus* Bedford & Bedford, *Loculicyathus* Vologdin, *Vologdin*, A. G., pp. 177-178,

- †*Ajaciocyathus utriculoporus* sp. n., p. 8, pl. 1, fig. 1; pl. 3, fig. 1, *compositus* sp. n., pp. 9-10, pl. 1, fig. 2; pl. 3, fig. 2, *crassus* sp. n., p. 10, pl. 3, figs. 3-4, *ellipticus* sp. n., p. 11, pl. 3, fig. 5, Cambrian, Morocco, Debrénne, F.; *A. waliseri* sp. n., pp. 696-697, pl. 19, fig. 3, cf. *grandipora* Taylor, p. 697, pl. 19, fig. 4, cf. *ajaz*, p. 697, pl. 19, fig. 6a, Cambrian, Australia, Debrénne, F. and M.; *A. type species ajaz* (Taylor), p. 175, fig. 1a, Cambrian, Australia, Vologdin, A. G.
- †*Aphrosalpinx textilis* Miagkova, Cambrian, U.S.S.R., Miagkova, E. I., pp. 89-90, fig.
- †*Archaeocyathus trachealis* Taylor, p. 79, pl. 5, *marianus* Roemer, p. 80, pl. 6, *ajaz* Taylor, p. 81, pl. 7, *infundibulum* Bornemann, p. 82, pl. 8, *aduncus*, p. 83, pl. 9, *profundum* Billings, p. 84, pl. 10, *sinuosus* Bornemann, p. 85, pl. 11, *sellitcki* Taylor, p. 86, pl. 12, *recepta* Taylor, p. 87, pl. 13, Cambrian, Spain, Badillo, L.; *A. irregularis* (Taylor), Cambrian, Australia, Debrénne, F. and M., p. 702, pl. 20, fig. 5.
- †*Archaeolynthus incertus* (Bedford), Cambrian, Australia, Debrénne, F. and M., p. 696, pl. 19, figs. 1-2; *A. peltatus* sp. n., Cambrian, U.S.S.R., Maslov, A. B., p. 121.
- †*Ascoocyathus* gen. nov., pp. 175-177, fig. 1b, type species *Archaeocyathus arteminterium* Vologdin 1931, Cambrian, U.S.S.R., Vologdin, A. G.
- †*Bronchocyathus dentatus* (Taylor), Cambrian, Australia, Debrénne, F. and M., p. 703, pl. 20, fig. 8.
- †*Clathroscinus inopinatus* sp. n., L. Cambrian, U.S.S.R., Rozanov, A. Y., p. 403, fig. 1a-c.
- †*Coscinoocyathus amuloides* sp. n., pp. 11-12, pl. 1, fig. 4; pl. 3, fig. 6, *perlucidus* sp. n., pp. 12-13, pl. 4, fig. 1, *longispinosus* sp. n., pp. 13-14, pl. 4, fig. 2; pl. 6, figs. 1-2, *echinatus* sp. n., p. 14, pl. 4, fig. 4; pl. 6, fig. 3, *tubiporus* sp. n., p. 15, pl. 1, fig. 3; pl. 6, fig. 5, Cambrian, Morocco, Debrénne, F.; *C. belanensis* Ting, pp. 697-698, pl. 19, figs. 5, 7; *tingi* sp. n., pp. 698-699, pl. 19, figs. 8-9, Cambrian, Debrénne, F. and M.
- †*Coscinoptycha bilateralis* (Taylor), Cambrian, Australia, Debrénne, F. and M., pp. 699-700, pl. 19, figs. 10, 13; pl. 20, fig. 6c.
- †*Dictiocyathus sampelayus* Hern. Pach., Cambrian, Spain, Badillo, L., p. 78, pl. 4.
- †*Dokidocyathus simpliciissimus* Taylor, Cambrian, Australia, Debrénne, F. and M., pp. 702-703, pl. 20, figs. 6b, 7.
- †*Echinocyathus* gen. nov., type species *bilateralis* sp. n., Cambrian, U.S.S.R., Vologdin, A. G., p. 177, fig. 1j.
- †*Eriemascosinus maroccanus* Debrénne, pp. 15-16, pl. 4, fig. 3; pl. 6, fig. 4, Cambrian, Morocco, Debrénne, F.
- †*Geniculicyathus* gen. nov., p. 16, *varius* sp. n., pp. 16-17, pl. 1, figs. 5-6; pl. 4, fig. 5; pl. 6, fig. 6, *varius* var. *cylindricus*, p. 17, pl. 1, fig. 7, *varius* var. *pulvinosus*, p. 18, pl. 1, fig. 8, Cambrian, Morocco, Debrénne, F.
- †*Gorskinocyathus* gen. nov., p. 177, fig. 1d, type species *Archaeocyathus gorskinensis* Vologdin, Cambrian, U.S.S.R., Vologdin, A. G.
- †*Kordecyathus* gen. nov., p. 21, type species *shiveligenis* sp. n., pp. 21-22, pl. 1, figs. 3, 5, *spinosus* sp. n., pp. 22-23, pl. 1, fig. 4, text-fig. 1, Cambrian, U.S.S.R., Missarzhevsky, V. V.
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- †*Membranocyathus* gen. nov., p. 405, type species *repinae* sp. n., pp. 405-406, fig. 1g, h, L. Cambrian, U.S.S.R., Rozanov, A. Y.
- †*Neocyathus* gen. nov., p. 177, fig. 1e, type species *Archaeocyathus laevis* Vologdin, Cambrian, U.S.S.R., Vologdin, A. G.
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